

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of providing an advance screen saver warning for a display apparatus, the method comprising:

predetermining a screen saver standby time and an advance screen saver warning time, wherein the advance screen saver warning time is less than or equal to the screen saver standby time;

counting a current system idle time during which no system input activity is detected;

activating an advance screen saver warning before activating a screen saver if the current system idle time is greater than or equal to a time difference between the screen saver standby time and the advance screen saver warning time; and

continuously ~~displaying~~implementing the activated advance screen saver warning by the display apparatus until system activity by a user of the system is detected;

deactivating the advance screen saver warning so that it is no longer displayed when a system input activity is detected, wherein the screen saver is activated when the current system idle time is greater than or equal to the screen saver standby time; and

controlling, during the continuous execution of the advance screen saver warning, the display apparatus to output at least one of a specified sound and a visual warning message window indicative of a time difference between the screen saver standby time and the current system idle time,

wherein the visual warning message comprises a textual representation of the time difference between the screen saver standby time and the current system idle time, a numerical representation of the time difference between the screen saver standby time and the current system idle time, and a graphical representation of the time difference between the screen saver standby time and the current system idle time.

2. (Previously Presented) The method of claim 1, further comprising deactivating the advance screen saver warning and activating the screen saver if the current system idle time is greater than or equal to the screen saver standby time.

3. (Original) The method of claim 2, wherein the deactivating the advance screen saver warning and the activating the screen saver are performed simultaneously.

4-7. (Cancelled)

8. (Currently Amended) The method of [[claim 7]]claim 1, wherein the graphical representation included in the warning message window is any one of a bar-type graph, a clock-type graph with a moving indicator, and a pie-type graph.

9. (Previously Presented) The method of claim 1, wherein the visual warning message window is displayed on a predetermined screen portion of the display screen, which is automatically determined by default or is manually determined by an operator.

10. (Previously Presented) The method of claim 1, further comprising undisplaying the visual warning message window from the display screen if any system input activity is detected.

11. (Previously Presented) The method of claim 1, further comprising undisplaying the visual warning message window and activating the screen saver if the current system idle time is greater than or equal to the screen saver standby time.

12. (Previously Presented) The method of claim 1, wherein the visual warning message window is an on-screen-display (OSD) window.

13. (Cancelled)

14. (Previously Presented) The method of claim 1, wherein the specified sound is any one of a computer-generated sound and a human voice indicating a time remaining until the screen saver is activated.

15. (Original) The method of claim 1, wherein the screen saver standby time is a total length of system idle time that must elapse before activating the screen saver.

16. (Original) The method of claim 1, wherein the advance screen saver warning time is a length of time during which the advance screen saver warning is continuously activated before activating the screen saver.

17. (Original) The method of claim 1, wherein the screen saver standby time is predetermined to an automatically assigned default value or a manually selected value.

18. (Original) The method of claim 1, wherein the advance screen saver warning time is predetermined to an automatically assigned default value or a manually selected value.

19. (Previously Presented) The method of claim 1, wherein the system input activity includes at least one of a horizontal synchronization signal, a vertical synchronization signal, and a manual user input.

20. (Original) The method of claim 19, wherein the manual user input is made by a user through a keyboard or mouse.

21. (**Currently Amended**) A display apparatus for providing an advance screen saver warning, the apparatus comprising:

a parameter set unit for predetermining a screen saver standby time and an advance screen saver warning time, wherein the advance screen saver warning time is less than or equal to the screen saver standby time;

a counter for counting a current system idle time during which no system input activity is detected; and

a controller, coupled to the parameter set unit and the counter, for activating an advance screen saver warning before activating a screen saver if the current system idle time is greater than or equal to a time difference between the screen saver standby time and the advance screen

saver warning time, and for continuously executing the activated advance screen saver warning by the display apparatus until a detection of system activity, whereupon the advance screen saver warning is deactivated,

wherein the screen saver is activated when the current system idle time is greater than or equal to the screen saver standby time,

wherein, during the continuous execution of the advance screen saver warning, the display apparatus is controlled by said controller to output at least one of a specified sound and a visual warning message window indicative of the time difference between the screen saver standby time and the current system idle time,

wherein the visual warning message comprises a textual representation of the time difference between the screen saver standby time and the current system idle time, a numerical representation of the time difference between the screen saver standby time and the current system idle time, and a graphical representation of the time difference between the screen saver standby time and the current system idle time.

22. (Previously Presented) The display apparatus of claim 21, wherein the controller further deactivates the advance screen saver warning and simultaneously activates the screen saver when the current system idle time is greater than or equal to the screen saver standby time.

23-26. (Canceled)

27. (**Currently Amended**) The display apparatus of [[claim 26]]claim 21, wherein the graphical representation included in the visual warning message window is any one of a bar-type graph, a clock-type graph with a moving indicator, and a pie-type graph.

28. (Previously Presented) The display apparatus of claim 21, wherein the visual warning message window is displayed on a predetermined screen portion of the display screen, the predetermined screen portion being automatically determined by the controller or being manually determined by an operator.

29. (Previously Presented) The display apparatus of claim 21, wherein the controller sends an interruption signal to the message window generator in order to undisplay the visual warning message window from the display screen when any system input activity is detected.

30. (Previously Presented) The display apparatus of claim 21, wherein the controller activates the screen saver and simultaneously sends an interruption signal to the message window generator in order to undisplay the visual warning message window when the current system idle time being counted by the counter is greater than or equal to the screen saver standby time.

31. (Previously Presented) The display apparatus of claim 21, wherein the message window generator is an on-screen-display (OSD) window generator, and the visual warning message window is an OSD window.

32. (Previously Presented) The display apparatus of claim 21, further comprising a speaker coupled to the controller for outputting the specified sound, wherein the specified sound is any one of a computer-generated sound and a human voice indicating a time remaining until the controller activates the screen saver.

33. (Previously Presented) The display apparatus of claim 21, wherein the screen saver standby time predetermined by the parameter set unit is a total length of system idle time that must elapse before the controller activates the screen saver.

34. (Previously Presented) The display apparatus of claim 21, wherein the advance screen saver warning time is a length of time during which the controller continuously activates the advance screen saver warning before activating the screen saver.

35. (Previously Presented) The display apparatus of claim 21, further comprising a sync detector coupled to the controller for detecting at least one of a horizontal synchronization signal

and a vertical synchronization signal, wherein the system input activity comprises receiving by said sync detector the at least one of horizontal and vertical synchronization signals.

36. (Previously Presented) The display apparatus of claim 21, further comprising a key input unit coupled to the controller for receiving a manual user input from an operator, wherein the system input activity comprises the manual user input.

37. (Previously Presented) The display apparatus of claim 36, wherein the key input unit is any one of a keyboard or mouse.

38. (Previously Presented) The display apparatus of claim 21, further comprising a memory coupled to the controller for storing the predetermined screen saver standby time and advance screen saver warning time.

39. (Previously Presented) The display apparatus of claim 38, wherein the memory is an Electrically Erasable Programmable Read-only Memory (EEPROM).

40-43. (Cancelled).

44. (Previously Presented) The method of claim 1, wherein the predetermined screen saver standby time and advance screen saver warning time are manually set by a user of the display apparatus.

45. (Previously Presented) The display apparatus of claim 21, wherein the predetermined screen saver standby time and advance screen saver warning time are manually set by a user of the display apparatus.

46. (Currently Amended) A method of providing an advance screen saver warning for a display apparatus, the method comprising:

predetermining a screen saver standby time and an advance screen saver warning time, wherein the advance screen saver warning time is less than or equal to the screen saver standby time;

counting a current system idle time during which a system idle time exceeds a time difference calculated by subtracting the current system idle time from the screen saver standby time; and

controlling, to continuously execute the advance screen saver warning when the difference calculated by subtracting the current system idle time from the screen saved standby time is less than or equal to the advance screen saver warning time, the display apparatus:

to continuously display a visual warning message window that includes a textual representation of the time difference between the screen saver standby time and the current system idle time, a numerical representation of the time difference between the screen saver standby time and the current system idle time, and a graphical representation of the time difference between the screen saver standby time and the current system idle time~~indicative of a time difference between the screen saver standby time and the current system idle time~~,

to discontinue displaying the visual warning message window, if system input activity is detected before the advance screen saver warning time is completed, and

to discontinue displaying the visual warning message window and execute a screen saver program restricting system access by requiring system authorization when the current system idle time exceeds the screen saver standby time,

wherein the screen saver standby time is a time value indicating a length of system idle time that must elapse before the controller activates the screen saver, and

wherein the advance screen saver warning time is a time value indicating a period of time during which the controller continuously activates the advance screen saver warning before activation of the screen saver.

47-49. (Cancelled)